

# **Citizen Monitoring Programs working with K-12 Meaningful Watershed Educational Experiences (MWEEs) in Virginia**

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**Virginia Tech Geosciences**

**Virginia Save Our Streams**



# MWEEs build into local, real-world activities

- Beginning with the class of 2005, provide a meaningful Bay or stream outdoor experience for every school student...before graduation from high school.
- Age-appropriate outdoor experiences should occur at each level: Elementary, Middle, and High School.
- Experiences should include a preparation phase, an outdoor action phase, and a reflection and reporting phase.

**So, what might be  
“meaningful” experiences?**





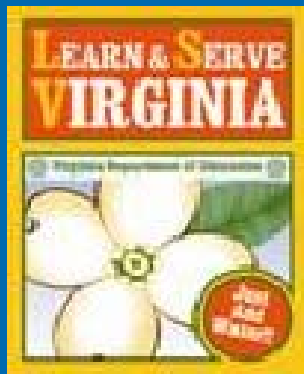


# **Collaboration with K-12 reaches many others in the community**

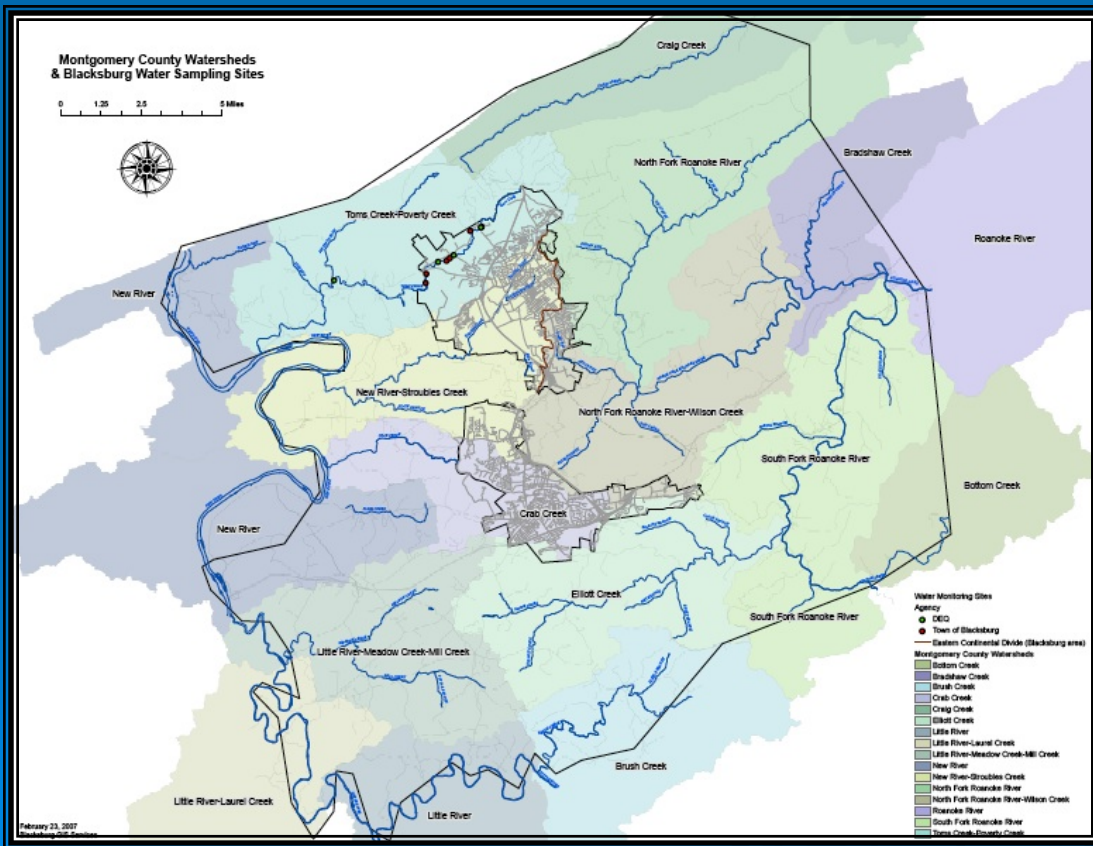
- ☯ **families and friends of kids and teachers**
- ☯ **youth groups and leaders**
- ☯ **town and county staff**
- ☯ **local decision-makers**

# Why choose “citizen science” programs?

- 👁️ field-tested protocols
- 👁️ materials already developed
- 👁️ shared data sets
- 👁️ support personnel available (i.e. volunteer monitors!)
- 👁️ gap analysis/scientific contribution



# Montgomery County, VA Dept. of Education Grant



- ☯ 27 partners
- ☯ 3 years, \$25K/yr
- ☯ All “strands”
- ☯ HS>MS>E
- ☯ GIS and web based tools
- ☯ Equipment for teachers











# Virginia Save Our Streams (SOS)

## www.vasos.org



*Protecting Virginia's Natural Resources Since 1989*



**DATA USERS**

[HOME](#) [WATER MONITORING](#) [OUR MONITORING METHOD](#) [GET CERTIFIED](#) [FEEDBACK](#)  
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**VA SOS trains and certifies volunteer water monitors** throughout the state. Data collected by our certified monitors is sent to state agencies for use in water quality assessments. We are a nonprofit, non-governmental organization, and a project of the [Virginia Division of the Izaak Walton League of America](#). We work with everyone from individuals to agencies to ensure that future generations inherit improved and protected streams, rivers, and estuaries across Virginia.

### WHAT'S NEW AT VA SOS

- Find out more about [World Water Monitoring Day and Virginia Water Monitoring Day](#)
- Can't find your way? [Click here for a VA SOS website index](#)
- Information on [the annual Citizens for Water Quality Summit, July 26th, Charlottesville,](#)















# World Water Monitoring Day

[www.worldwatermonitoringday.org](http://www.worldwatermonitoringday.org)



Month-long window for data collection  
Sept. 18 - Oct. 18 each year

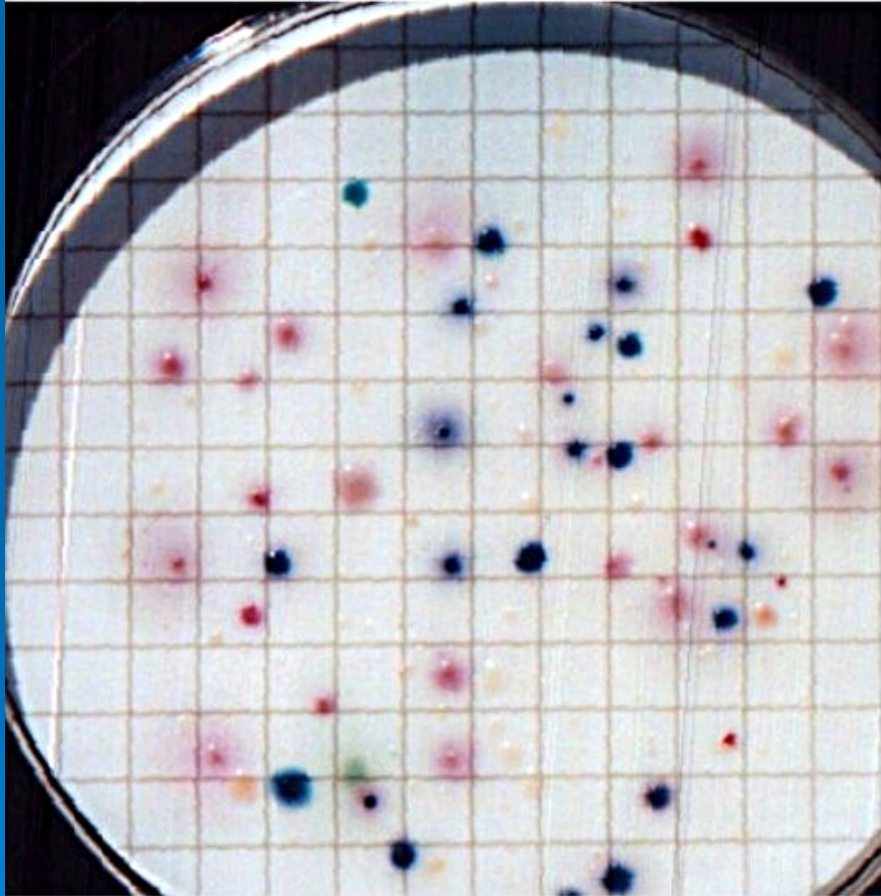
Four parameters: T, pH, dO, turbidity





# Coliscan™

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Approved by  
EPA for  
surface water  
monitoring

Measures *e. coli*  
vs total coliforms



[www.GLOBE.gov](http://www.GLOBE.gov)



















# Standards of Learning for Watershed Education

- ☉ (Kindergarten), 1st Grade, 4th Grade, 6th Grade, Earth Science, Biology, (Environmental Science)
- ☉ <http://www.pen.k12.va.us/VDOE/Instruction/sol.html>





